

IMPROVED DIGITAL CAMERA DEVICE AND METHODOLOGY FOR DISTRIBUTED
PROCESSING AND WIRELESS TRANSMISSION OF DIGITAL IMAGES
ABSTRACT OF THE DISCLOSURE

5 A digital imaging system is described that provides techniques for reducing
the amount of processing power required by a given digital camera device and for reducing
the bandwidth required for transmitting image information to a target platform. The system
defers and/or distributes the processing between the digital imager (i.e., digital camera itself)
and the target platform that the digital imager will ultimately be connected to. In this manner,
10 the system is able to decrease the actual computation that occurs at the digital imager.
Instead, the system only performs a partial computation at the digital imager device and
completes the computation somewhere else, such as at a target computing device (e.g.,
desktop computer) where time and size are not an issue (relative to the imager). By deferring
resource-intensive computations, the present invention substantially reduces the processor
5 requirements and concomitant battery requirements for digital cameras. Further, by adopting
an image strategy optimized for compression (compressed luminosity record), the present
invention decreases the bandwidth requirements for transmitting images, thereby facilitating
the wireless transmission of digital camera images.

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